

**EXPRESS MAIL LABEL NO. EL563155807US**

**CLAIMS**

1. A method for personalized profile based advertising associated with a network of hub processing units coupled to a plurality of information processing units over a network, the method of personalized profile based advertising on a first hub processing unit comprising the steps of:

entering an initializing routine to initialize hardware and software of the first hub processing unit by performing the sub-steps of:

an administrative receiving step of receiving administrative commands from a user to edit software on the first hub processing unit;

a registration step of receiving registration information from a second hub processing unit and from information processing units associated with the network;

a profile receiving step of receiving profile data and location data about locations of the information processing units;

entering an operational state for the personalized profile based advertising and performing the sub-step of:

gathering by a first manager associated with the first hub processing unit a received location data as well as a user profile data associated with an information processing unit stored in a database associated with the first hub processing unit.

2. The method as defined in claim 1, wherein the registration sub-step of receiving registration information from a second hub processing unit and from information processing units associated with the network further comprises the registration information from the second hub processing unit comprises registration information that has been modified by a user.

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1 3. The method as defined in claim 1, wherein the registration sub-step of receiving  
2 registration information from a second hub processing unit and from information  
3 processing units associated with the network further comprises receiving registration  
4 information from a second hub processing unit wherein the second hub processing unit  
5 is an initialized hub processing unit.

1 4. The method as defined in claim 1, wherein the registration sub-step of receiving  
2 registration information from a second hub processing unit and from information  
3 processing units associated with the network further comprises the second hub  
4 processing unit being a merchant server.

1 5. The method as defined in claim 1, wherein the registration sub-step of receiving  
2 registration information from a second hub processing unit and from information  
3 processing units associated with the network further comprises the information  
4 processing units comprising wireless components.

1 6. The method as defined in claim 1, wherein the registration sub-step of receiving  
2 registration information from a second hub processing unit and from information  
3 processing units associated with the network further comprises the information  
4 processing units being initialized information processing units.

1 7. The method as defined in claim 1, wherein the information processing units  
2 comprise information processing units selected from the group of information  
3 processing units consisting of cellular phones, personal data assistants, car computer  
4 systems and personal communication devices.

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1 8. The method as defined in claim 1, wherein the step of entering an operational  
2 state for the personalized profile based advertising further comprises performing after  
3 the gathering sub-step the further sub-steps of:  
4 determining whether or not the user profile matches a merchant profile  
5 and if the user profile matches a merchant profile matches then performing the  
6 secondary sub-steps of:  
7 forwarding the user location and profile to the second hub  
8 processing unit which performs further processing; and  
9 checking whether or not the information processing unit is turned  
10 on and if the information processing unit is turned on then continuing the  
11 personalized advertising process and if the information processing unit is  
12 not turned on then, ending the process for the information processing unit;  
13 wherein, if the user profile does not match the merchant profile then performing the  
14 secondary sub-step of:  
15 checking whether or not the information processing unit is turned  
16 on and if the information processing unit is turned on then continuing the  
17 personalized advertising process; otherwise, ending the process for the  
18 information processing unit.

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1 9. A method for personalized profile based advertising associated with a network of  
2 hub processing units coupled to a plurality of information processing units over a  
3 network, the method of personalized profile based advertising on a second hub  
4 processing unit comprising the steps of:

5 receiving location data and user profile data about an information processing unit  
6 from a first hub processing unit;

7 generating a personalized advertisement based upon the received location data  
8 as well as a user profile data associated with the information processing unit; and

9 forwarding the personalized advertisement to the information processing unit for  
10 display on an output device.

1 10. The method as defined in claim 9, wherein the information processing units  
2 comprise information processing units selected from the group of information  
3 processing units consisting of cellular phones, personal data assistants, car computer  
4 systems, wireless systems and personal communication devices.

1 11. The method as defined in claim 9, wherein the second hub processing unit  
2 comprises the second hub processing unit being a merchant server.

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1 12. The method as defined in claim 9, wherein the step of generating a personal  
2 advertisement further comprises the sub-steps of:  
3                   searching for advertisements in a database associated with the second  
4 hub processing unit for any ad profiles that match a user profile and if there are ads that  
5 match then performing the secondary sub-steps of:  
6                   determining whether or not a user location is close to a sales  
7 location and if user location is close to a sales location then performing  
8 the tertiary sub-steps of:  
9                   adding location information into the advertisement;  
10                   adding personal data into the advertisement; and  
11                   terminating the generating of personal advertising step;  
12 wherein if the user location and sales location are not if user location is  
13 close to a sales location then performing the tertiary sub-steps of:  
14                   adding personal data into the advertisement; and  
15                   terminating the generating of personal advertising step;  
16 wherein if there are no advertisements that match a user profile then  
17 terminating the generating of personal advertising step.

1 13. The method as defined in claim 12, wherein the adding of personal data tertiary  
2 sub-steps further comprise adding personal data selected from the group of personal  
3 data consisting of a name, interests, age, background, education, hobbies and other  
4 personalized data relating to the user.

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1 14. A method for personalized profile based advertising associated with a network of  
2 hub processing units coupled to a plurality of information processing units over a  
3 network, the method of personalized profile based advertising on a first hub processing  
4 unit comprising the steps of:

5 detecting an active information processing unit;  
6 connecting to the active information processing unit;  
7 requesting user location records and profile from the active information  
8 processing unit and if the location records exist then performing the sub-steps of:

9 receiving active information processing unit location records;  
10 searching for sales locations close to the user location records;  
11 determining if the user location records indicate if a user is in a sales  
12 location and if the user is in a sales location then performing the sub-steps of:

13  
14 loading map information from a first map database;  
15 determining if a user profile exists and if a user profile exists  
16 then performing the sub-steps of:

17 searching for a product in a products database;  
18 determining if any product matches the user profile;  
19 and if a product matches the user profile then performing the sub-  
20 steps of:

21 generating a first map;  
22 sending the first map to the active information  
23 processing unit;  
24 wherein if no product matches the user profile then performing the  
25 sub-steps of:

26 generating a second map;  
27 sending the second map to the active information  
28 processing unit;

29 wherein if a user profile does not exist then performing the sub-

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1 steps of:  
2 generating a third map;  
3 sending the third map to the active information processing  
4 unit;  
5 wherein if the user location records indicate that a user is not in a  
6 sales location then performing the sub-steps of:  
7 loading map information from a second map database;  
8 determining user direction from the user location records;  
9 creating a fourth map;  
10 sending the fourth map to the active information processing  
11 unit;  
12 wherein if the user location records do not exist then performing the  
13 sub-steps of:  
14 receiving an error message from the active information  
15 processing unit.

1 15. The method as defined in claim 14, wherein the first hub processing unit  
2 comprises an advertisement server.

1 16. The method as defined in claim 14, wherein the information processing units  
2 comprise information processing units selected from the group of information  
3 processing units consisting of cellular phones, personal data assistants, car computer  
4 systems and personal communication devices.

1 17. The method as defined in claim 14, wherein the active information processing  
2 unit records comprise at least two location records for the active information processing  
3 unit.

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1 18. The method as defined in claim 14, wherein the first map comprises a map to the  
2 matched product, the second map and third maps comprise generic aisle maps for the  
3 sales location, and the fourth map comprises a driving map from a user location to a  
4 sales location.

1 19. The method as defined in claim 14, wherein the first map database comprises  
2 sales location aisle map information and the second map database comprises road  
3 map information.



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20. An information processing unit apparatus for personalized profile based advertising associated with a network of hub processing units coupled to a plurality of information processing units over a network, the information processing unit apparatus comprising:

- a manager for directing and coordinating the operation of the following components:
  - a location interface component for receiving location signals from a global positioning system (GPS);
  - a communication interface for communicating via a network with hub processing units selected unit consisting of a control server a merchant server, and an advertising server;
  - an output for one or more databases for storage of personal information;
  - an output for graphical user interface for displaying information and receiving user inputs; and
  - an input output for effecting the display of the graphical user interface and for effecting the input of user commands.

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21. A merchant advertising hub processing unit apparatus for personalized profile based advertising associated with a network of hub processing units coupled to a plurality of information processing units over a network, the merchant advertising hub processing unit apparatus comprising:

a manager for directing and coordinating the operation of the following components:

a communication interface for communicating via a network with devices selected from the group of groups: a control server hub processing unit with information processing units and information processing units;

a group of databases for storage of information selected from the group of groups: locations database with advertisement information database and locations database with products database also with maps information database;

a graphical user interface for displaying information and receiving user inputs; and

an input output device for effecting the display of the graphical user interface and for effecting the input of user commands.

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22. A control hub processing unit apparatus for personalized profile based advertising associated with a network of hub processing units coupled to a plurality of information processing units over a network, the control hub processing unit apparatus comprising:

- a manager for directing and coordinating the operation of the following components:
  - a communication interface for communicating via a network with merchant hub processing units and with information processing units;
  - a group of databases for storage of information including user locations, user profiles and merchant profiles;
  - a graphical user interface for displaying information and receiving user inputs; and
  - an input output device for effecting the display of the graphical user interface and for effecting the input of user commands.